CLAIM AMENDMENTS:

Please cancel Claims 13-25. The following listing of claims replaces all prior versions and listing of claims in the application:

1. (Previously Presented) A method for allocating address space for a computer platform, comprising: gathering resource requests for a plurality of peripheral devices hosted by the computer platform;

determining a resource allocation scheme to support the resource requests of the peripheral devices that consumes a minimum amount of address space; and

allocating address space for respective peripheral devices based on the resource allocation scheme that is determined.

2. (Previously Presented) The method of claim 1, wherein the peripheral devices comprise PCI (Peripheral Component Interconnect) devices.

3. (Previously Presented) The method of claim 2, wherein the resource allocation scheme is implemented via operations including:

aggregating the resource requests for PCI devices at a given level of a PCI hierarchy for the computer platform into respective resource request objects, each resource request object having a size corresponding to the aggregated resource requests of the PCI devices to which it corresponds;

defining a bin size comprising an address space aperture corresponding to a resource type of the resource requests; and

sorting, via a bin-packing algorithm, the resource request objects into appropriate bins to minimize the number of bins required to support the resource requests for all of the PCI devices hosted by the computer platform.

4. (Previously Presented) The method of claim 3, wherein the bin-packing algorithm is the K^{th} approximation knapsack algorithm.

5. (Previously Presented) The method of claim 3, wherein the resource requests are aggregated at the PCI root bridge level.

6. (Previously Presented) The method of claim 1, wherein the resource requests pertain to peripheral device input/output (I/O) address requests.

7. (Previously Presented) The method of claim 6, wherein the peripheral device I/O address requests are allocated to a portion of platform address space containing virtual addresses.

8. (Previously Presented) The method of claim 1, wherein the resource requests pertain to memory onboard peripheral devices that is requested to be mapped into the computer platform address space.

9. (Previously Presented) The method of claim 1, further comprising determining resource alignment requirements for the resource allocation.

10. (Previously Presented) The method of claim 1, further comprising performing legacy aliasing, wherein resources are mapped to the address space in a manner that accounts for legacy device addressing considerations.

11. (Previously Presented) The method of claim 1, further comprising allocating a reserved portion of address space for hot-plug devices.

12. (Previously Presented) The method of claim 11, wherein the allocation of the reserved portion of address space for hot-plug devices enables dynamic reallocation of resources in response to the removal or addition of a hot-plug device to the computer platform.

Claims 13-25 Cancelled